

Patent Abstracts of Japan

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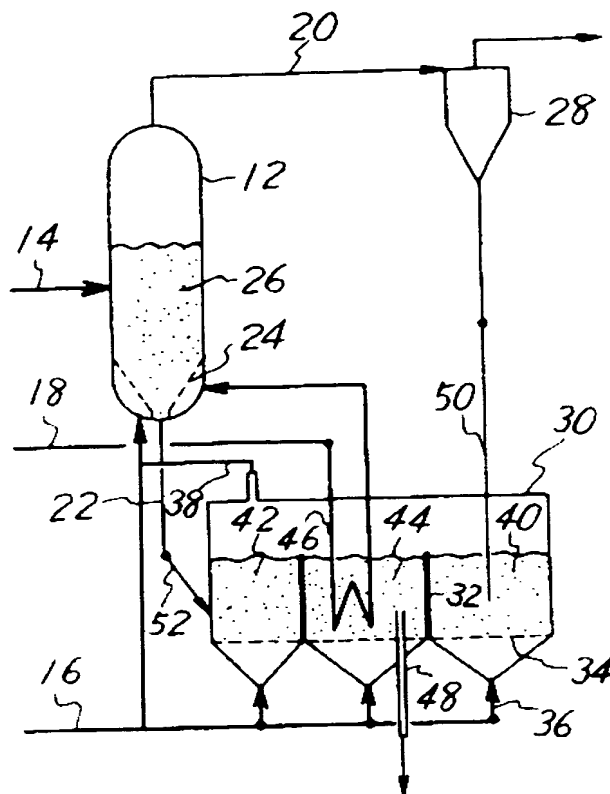
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TITLE : METHOD AND APPARATUS FOR GASIFICATION OF COAL



ABSTRACT : PURPOSE: To enhance gasification efficiency, by a method wherein char (discharged from a gasification furnace in the gasification of coal) and fine char powder (separated by a cyclone) are burned in a combustion device other than the gasification furnace, and the resulting carbonic acid gas as a heating gas is recycled to the gasification furnace.

CONSTITUTION: Coal, heavy oil, etc. 14 is introduced into a gasification furnace 12. Air 16 and steam 18 are supplied to the furnace 12 to gasify coal and heavy oil. The produced gas is supplied to a cyclone 28 to remove fine char powder and then transferred to a purification stage. The fine char powder is supplied to the fine powder-combustion chamber 40 of a fluidized-bed combustion gasifier 30. Char produced in the gasification furnace 12 is supplied through a pipe 52 to the coarse particle-combustion chamber 42 of the fluidized-bed combustion gasifier 30. The char in the chambers 40 and 42 is contacted with air 36, whereby the char is burned and converted into high-temperature carbonic acid gas and ash. The ash is cooled by air 36 and a cooling coil 46 connected to the steam pipe 18. Air heated by the ash and said carbonic acid gas are passed through a pipe 38 into the gasification furnace 12 to supply heat of reaction required for the gasification.

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